

In the claims

1. (Currently Amended) A process for producing polynucleotide phosphorylase (PNPase), comprising at least the following steps:

(A) constructing an expression vector comprising a prokaryote-derived polynucleotide phosphorylase (PNPase) gene, which gene is isolated from a prokaryote selected from the group consisting of *Escherichia coli* and its analogous bacteria and is integrated into a plasmid having a T7 promoter as an expression-regulating signal;

(B) transforming *Escherichia coli* or its analogous bacteria having a T7 RNA polymerase gene using the expression vector;

(C) allowing the resulting transformant to express the polynucleotide phosphorylase (PNPase) gene thereby accumulating polynucleotide phosphorylase (PNPase) in the bacteria, and further continuing to allow expression until the bacteria is disrupted to release the polynucleotide phosphorylase (PNPase) into the supernatant outside of the bacteria; and

(D) recovering ~~the bacteria having PNPase accumulated therein,~~ and extracting and purifying the polynucleotide phosphorylase (PNPase) released in the supernatant.

2. (Cancelled)

3. (Currently Amended) The process according to claim 1, wherein the plasmid has a tag gene capable of adding a tag to the polynucleotide phosphorylase (PNPase) to be produced.

4. (Previously Presented) The process according to claim 3, wherein the tag gene is a His tag gene, T7 tag gene, S tag gene, Nus tag gene, GST tag gene, DsbA tag gene, DsbC tag gene, CBD<sub>ccx</sub> tag gene, CBD<sub>cenA</sub> tag gene, CBD<sub>clos</sub> tag gene, Trx tag gene, HSV tag gene, or 3×FLAG tag gene.

5. (Currently Amended) The process according to any one of claims 1, 3 and 4, ~~11 or 12~~, wherein the prokaryote is *Escherichia coli*.

6. (Currently Amended) The process according to claim 5, wherein the *Escherichia coli* is *Escherichia coli* K12, *Escherichia coli* C600K or *Escherichia coli* O157.

7. (Previously Amended) The process according to claim 1, wherein the *Escherichia coli* having a T7 RNA polymerase gene is *Escherichia coli* BL21 [DE3], *Escherichia coli* BL21 [DE3] pLysS, *Escherichia coli* BLR [DE3], *Escherichia coli* Rosetta [DE3], or *Escherichia coli* B834 [DE3].

8-10. (Previously Cancelled)

11-13. (Cancelled) .

14. (Previously Presented) The process according to claim 3, wherein the *Escherichia coli* having a T7 RNA polymerase gene is *Escherichia coli* BL21 [DE3], *Escherichia coli* BL21 [DE3] pLysS, *Escherichia coli* BLR [DE3], *Escherichia coli* Rosetta [DE3], or *Escherichia coli* B834 [DE3].

15. (Previously Presented) The process according to claim 4, wherein the *Escherichia coli* having a T7 RNA polymerase gene is *Escherichia coli* BL21 [DE3], *Escherichia coli* BL21 [DE3] pLysS, *Escherichia coli* BLR [DE3], *Escherichia coli* Rosetta [DE3], or *Escherichia coli* B834 [DE3].

16. (Previously Presented) The process according to claim 5, wherein the *Escherichia coli* having a T7 RNA polymerase gene is *Escherichia coli* BL21 [DE3], *Escherichia coli* BL21 [DE3] pLysS, *Escherichia coli* BLR [DE3], *Escherichia coli* Rosetta [DE3], or *Escherichia coli* B834 [DE3].

17. (Previously Presented) The process according to claim 6, wherein the *Escherichia coli* having a T7 RNA polymerase gene is *Escherichia coli* BL21 [DE3], *Escherichia coli* BL21 [DE3] pLysS, *Escherichia coli* BLR [DE3], *Escherichia coli* Rosetta [DE3], or *Escherichia coli* B834 [DE3].

18-19. (Cancelled).

20. (New) The process according to any one of claims 1, 3 and 4 wherein the prokaryote is *Salmonella typhimurium*.

21. (New) The process according to claim 20, wherein the *Escherichia coli* having a T7 RNA polymerase gene is *Escherichia coli* BL21 [DE3], *Escherichia coli* BL21 [DE3] pLysS, *Escherichia coli* BLR [DE3], *Escherichia coli* Rosetta [DE3], or *Escherichia coli* B834 [DE3].